

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Canceled)
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9. (Canceled)
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15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Previously Presented) A braking force distribution control device comprising:

wheel speed detecting means for detecting wheel speeds of respective wheels of a vehicle;

road surface μ slope estimating means for, on the basis of the detected wheel speeds, estimating for the respective wheels slopes of a coefficient of friction μ between the wheels and a road surface as road surface μ slopes;

control means for, on the basis of the road surface μ slopes estimated for the respective wheels by the road surface μ slope estimating means, distributing braking forces to the respective wheels by controlling the braking force of each wheel; and

wherein on the basis of the detected wheel speeds, the road surface μ slope estimating means estimates slopes of braking forces with respect to wheel slip speeds as the road surface μ slopes for the respective wheels, and the control means determines a relationship between the road surface μ slope of a wheel which is an object of control and the road surface μ slope of a reference wheel, and controls a braking torque of the wheel which is the object of control taking into account said relationship.

19. (Previously Presented) A braking force distribution control device according to claim 18, wherein in a case in which a front wheel is the reference wheel and a rear wheel is the wheel which is the object of control, when a variation between the road surface μ slope of the front wheel and the road surface μ slope of the rear wheel is greater than a first predetermined value, the control means increases the braking torque of the rear wheel, and when the variation is less than a second predetermined value, the control means reduces the braking torque of the rear wheel.

20. (Previously Presented) A braking force distribution control device according to claim 19, wherein the control means carries out select-low control in accordance with, among the two rear wheels, the wheel which has the lower road surface μ slope or the wheel which has the lower braking torque.

21. (Previously Presented) A braking force distribution control device according to claim 18, wherein in a case in which a rear wheel is the reference wheel

and a front wheel is the wheel which is the object of control, when a variation between the road surface μ slope of the front wheel and the road surface μ slope of the rear wheel is greater than a first predetermined value, the control means increases the braking torque of the front wheel, and when the variation is less than a second predetermined value, the control means reduces the braking torque of the front wheel.

22. (Previously Presented) A braking force slope distribution device according to claim 18, wherein in a case in which a turning inner side wheel is the reference wheel and a turning outer side wheel is the wheel which is the object of control, when a variation between the road surface μ slope of the turning inner side wheel and the road surface μ slope of the turning outer side wheel is greater than or a first predetermined value, the control means increases the braking torque of the turning outer side wheel, and when the variation is less than a second predetermined value, the control means reduces the braking torque of the turning outer side wheel.

23. (Previously Presented) A braking force distribution control device according to claim 18, wherein in a case in which a turning outer side wheel is the reference wheel and a turning inner side wheel is the wheel which is the object of control, when a variation between the road surface μ slope of the turning outer side wheel and the road surface μ slope of the turning inner side wheel is greater than or a first predetermined value, the control means increases the braking torque of the turning inner side wheel, and when the variation is less than a second predetermined value, the control means reduces the braking torque of the turning inner side wheel.

24. (Previously Presented) A braking force distribution control device according to claim 18, wherein the control means controls the braking torque by using one of a turning inner side front wheel, a turning outer side front wheel, a turning inner side rear wheel, and a turning outer side rear wheel as the reference wheel, and using at least one other wheel as the wheel which is the object of control.

25. (Previously Presented) A braking force distribution control device comprising:

wheel speed detecting means for detecting wheel speeds of respective wheels of a vehicle;

road surface μ slope estimating means for, on the basis of the detected wheel speeds, estimating for the respective wheels slopes of a coefficient of friction μ between the wheels and a road surface as road surface μ slopes;

control means for, on the basis of the road surface μ slopes estimated for the respective wheels by the road surface μ slope estimating means, distributing braking forces to the respective wheels by controlling the braking force of each wheel; and

wherein on the basis of the detected wheel speeds, the road surface μ slope estimating means estimates slopes of braking forces with respect to wheel slip speeds as the road surface μ slopes for the respective wheels, and the control means controls a braking torque of a wheel which is an object of control by taking into account a difference between the road surface μ slope of the wheel which is the object of control and the road surface μ slope of a reference wheel among the road surface μ slopes estimated by the road surface μ slope estimating means.

26. (Previously Presented) A braking force distribution control device according to claim 25, wherein in a case in which a front wheel is the reference wheel and a rear wheel is the wheel which is the object of control, when the difference between the road surface μ slope of the front wheel and the road surface μ slope of the rear wheel is greater than a first predetermined value, the control means increases the braking torque of the rear wheel, and when the difference is less than a second predetermined value, the control means reduces the braking torque of the rear wheel.

27. (Previously Presented) A braking force distribution control device according to claim 26, wherein the control means carries out select-low control in accordance with, among the two rear wheels, the wheel which has the lower road surface μ slope or the wheel which has the lower braking torque.

28 (Previously Presented) A braking force distribution control device according to claim 25, wherein in a case in which a rear wheel is the reference wheel and a front wheel is the wheel which is the object of control, when the difference between the road surface μ slope of the front wheel and the road surface μ slope of the rear wheel is greater than a first predetermined value, the control means increases the braking torque of the front wheel, and when the difference is less than a second predetermined value, the control means reduces the braking torque of the front wheel.

29 (Previously Presented) A braking force slope distribution device according to claim 25, wherein in a case in which a turning inner side wheel is the reference wheel and a turning outer side wheel is the wheel which is the object of control, when the difference between the road surface μ slope of the turning inner side wheel and the road surface μ slope of the turning outer side wheel is greater than or a first predetermined value, the control means increases the braking torque of the turning outer side wheel, and when the difference is less than a second predetermined value, the control means reduces the braking torque of the turning outer side wheel.

30. (Previously Presented) A braking force distribution control device according to claim 25, wherein in a case in which a turning outer side wheel is the reference wheel and a turning inner side wheel is the wheel which is the object of control, when the difference between the road surface μ slope of the turning outer side wheel and the road surface μ slope of the turning inner side wheel is greater than or a first predetermined value, the control means increases the braking torque of the turning inner side wheel, and when the difference is less than a second predetermined value, the control means reduces the braking torque of the turning inner side wheel.